2013

Information Technology Department

City of Sugar Land

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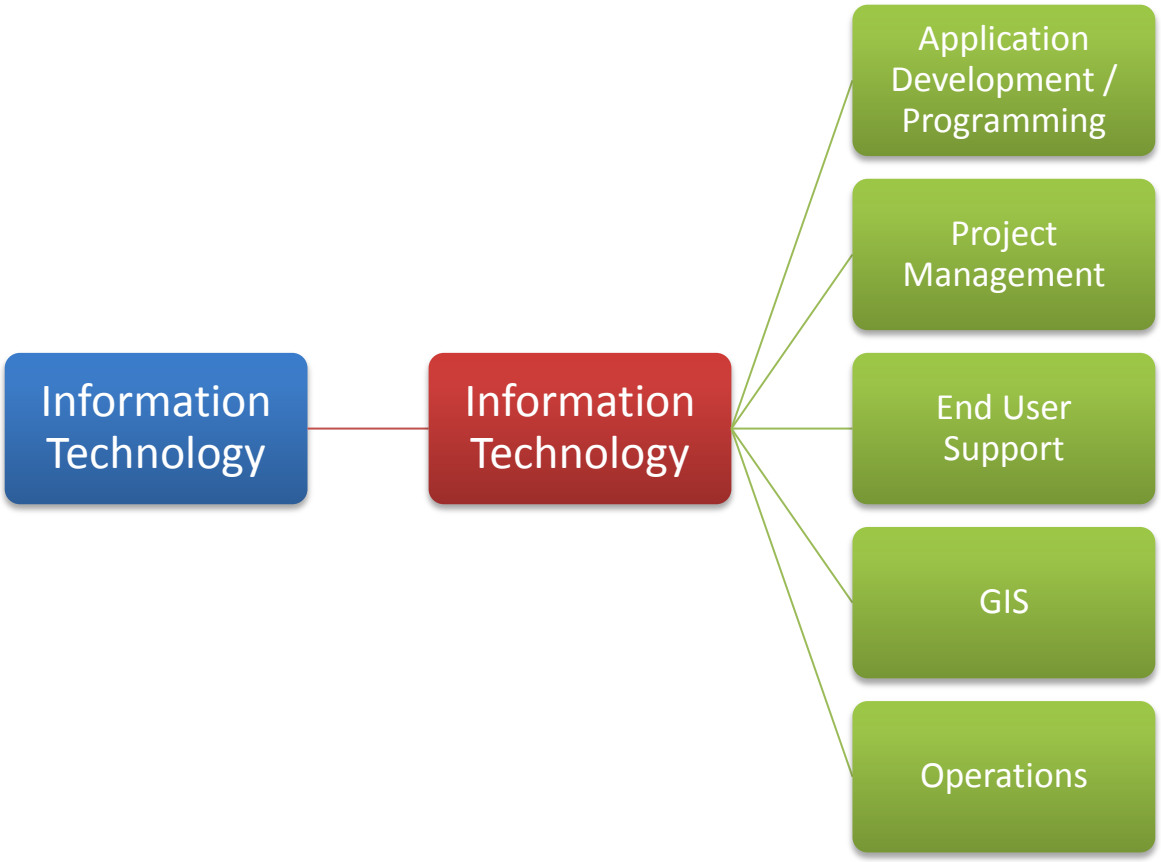

2013 PROGRAM OF SERVICES

Information Technology

Program Summary

The Information Technology Department (IT) provides city-wide support to all departments within the City of Sugar Land through guidance in an effective, strategic and fiscally responsible manner. This goal is accomplished by providing services in application development, end user support, geographical information services, operations, and project management. As an internal services department, IT provides support for departments that directly serve citizens. As such, IT supports the city-wide goal for providing "Responsible City Government." A continuous cycle of monitoring and reporting of IT service level performance, as well as departmental strategies assist IT in providing optimal service level objectives.

Services and Service Levels

Service: Application Development

- Application development involves the creation and maintenance of applications, interfaces, and front ends to new or existing systems. There are two fulltime programmers who develop applications for the City. The process for requesting in-house developed applications are typically initiated by department directors. The complexity of the project and participation of the user requesting application development determines the timeline for the software development life cycle (SDLC). The phases of SDLC as practiced in the IT department are:

    - **Analysis** – Determine the functions that the application is meant to address and work with the Project team to develop and create a project scope. During the requirements gathering phase of the project, an IT project manager or analyst will work with a programmer to determine the feasibility of the project requested. If it is determined that the project can be developed in-house, a project charter is created with the scope, deliverables, budget (if applicable), and timeline for the project.

    - **Design** – Developing a blueprint for software design that aligns with user requirements and select the most appropriate programming language; visiting departmental representatives to determine how they perform daily tasks that will utilize the application requested**.** Write code to develop application.

    - **Test** – Processes necessary to ensure the application functions according to requirements.
        - *Developer Test* – Developer test all application components to ensure software conforms to user design requirements.
        - *User Test* – User test all application components to ensure software conforms to design requirements.

- **Implementation** – Processes necessary to put the application into production for end-users.
  - *User/Technical Documentation* – Developer produces technical documentation and user guides for the application.
  - *User Training* – End-users that will be utilizing the application are trained.
  - *Go Live* – Application is put into production and used by end-users.

- **Maintenance** – Ongoing maintenance of installed and developed applications.
  - *Change Control* – User requests for modifications are evaluated to determine what the impact of change will be on application design, project scope, time, and budget. If it is determined that the change will adversely affect the project timeline or budget, the requested change may need to be addressed in a future iteration of the application being developed.

  As of January 1, 2012, eighteen (18) applications have been developed with an average of seven (7) requests for application development throughout a fiscal year.

Service: Project Management

- **Project Request**
  - A technology project is usually requested through the budget process by an external department and has an associated budget. Typically, the IT department will oversee these projects to ensure that the requested project is compatible with the existing network and technology infrastructure. Mid-year technology projects are also undertaken by the department. These projects are evaluated against existing workload and existing IT infrastructure to determine when the project can be initiated and completed.

- **Project Management**

  - Project management involves managing and overseeing technology projects—both within the IT department and city-wide—to ensure project goals and objectives are achieved within scope, time, and budget.

  - Project management processes are grouped into the following five categories:

    - **Initiation** – Processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase and execution of the project charter. This is typically done by an external department through the budget process, though mid-year requests also occur.

    - **Planning** - Processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that

the project was undertaken to achieve. During this phase, the project charter is developed, which is the governing document for the project. The charter is signed by the departmental director and project manager assigned to the project, and includes the scope, deliverables, budget, and anticipated timeline.

- **Execution** – Processes performed to complete the work defined in the project management plan to satisfy the project specifications.

- **Monitoring and Controlling** – Processes required to track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes.
- **Project Closing** – Processes performed to finalize all activities across all Process Groups to formally close the project or phase by signing the project closure document.

As of January 1, 2012, the department had nine (9) active projects being managed by the project team with an average of eleven (11) requests for new technology projects throughout a fiscal year.

Service: End User Support

- User Services

  End User Support provides assistance to city employees in their use of technology to include desktop hardware and software. Configures, installs, and maintains desktop systems, in addition to maintaining technology inventory city-wide. Telecommunications, including cellular and wired phones, is supported by this group as well.

  This is the first point of contact for all requests handled by the department. These requests are distributed based on department resources and the nature of the request received.

- Help Desk

  End User Support operates the help desk, which has been set up within the IT department to allow constant communication between the department and users. During the work day, a phone call or an email to the help desk will elicit the creation of a request for service (RFS). After hours, a call to the help desk will result in a call to the staff member on duty following the creation of an RFS. Each RFS is entered into a tracking system and is assigned a priority based on the severity of the issue. Calls to the help desk are not handled on a first come, first served basis but as a triage system, such as defined below:

  Priority system:

  - Priority 1: System Outage (Server, Loss of building/floor network, affects multiple users) – Resolution ASAP.

- Priority 2: Individual Work Stoppage – Resolution within 4 business hours.
- Priority 3: Individual User Inconvenience – Resolution within 24 business hours.
- Priority 4: Purchase Request – Provide pricing within 10 business days.
- Priority 5: Long-Term Request – Follow up with user weekly until resolved.
- Priority 6: Procurement; Awaiting Receipt – Follow up with user when item has shipped.

Service: Operations

- **Operations and Networks**

  - **Operations** – Maintains the integrity of the City of Sugar Land's computer and communications infrastructure. Performs more advanced maintenance, especially where it involves city wide services. This also includes installation and integration of systems and applications for use by Police, Fire, Emergency Management, and Municipal Court.

    Because of the around the clock usage of IT systems, especially in public safety, the operations staff is available 24 hours a day, 7 days a week. The departmental offices are open from 8 to 5 Monday through Friday; however, there is always a technical staff member on call. System maintenance is typically performed on weekends or after hours to eliminate or curtail the impact on users.

  - **Change Control** - Change Control is the process of requesting, analyzing, approving, developing, implementing, and reviewing a planned or unplanned change within the IT infrastructure. The Change Control Process begins with the creation of a Request for Change (RFC) form. It ends with the satisfactory implementation of the change and the communication of the result of that change to all interested parties.

  - **Wireless Communications Infrastructure** – Maintain the microwave ring that consists of nine (9) high sites located throughout the City. Ensure connection from the high sites back to the City's network via two fiber optic penetrations. Currently there are over eighty (80) traffic intersections that connect back to the nine (9) high sites via an Federal Communications Commission (FCC) regulated 4.9 spectrum.

    All FCC licenses associated with the wireless network are maintained through Operations. Future use plans include wireless meter reading, Supervisory Control and Data Acquisition (SCADA) communications, and integration with the Police Department's City-Wide Surveillance project. In addition, plans are to design and implement infrastructure to allow public access Wi-Fi in both City Hall and the Police Department. This will provide the public with access to the internet while visiting City facilities. Currently Airport, Senior Center, and the Imperial Park Recreation Center (IPRC) have public access Wi-Fi.

- **Network Infrastructure** – Operations manages all network equipment across nineteen (19) sites with a combination of fiber connectivity, as well as leased connections such as T1, Frame Relay, and the City's internet connection.

- **Data Storage and Backup** – Operations manages storage resources for the enterprise including pooled disk and tape. Configures and maintains a Storage Area Network (SAN). Allocates storage resources as needed.

- **Security** – Maintain network security through management of the Demilitarized Zone (DMZ) and firewalls. Provide updates and patches to all network devices. Ensure antivirus and web filter systems are active and up-to-date. Provide network access for both City employee's and outside consultants via Virtual Private Network (VPN) and remote access ability**.**

- **System Administration** – Perform system maintenance on multiple server platforms. Handle all aspects of application management from design, installation, and maintenance. Provide and manage user and group level network rights. Install system hardware and software backend solutions. Ensure that software and operating systems are maintained at supported release levels.

Service: Geographical Information Systems (GIS) Services

- **GIS** – Coordinates city wide activities and retains responsibility for the City of Sugar Land's Geographic Information Systems.

  GIS provides system and user level support, as well as advanced spatial analysis. System support is provided by ensuring all GIS databases, servers, and web applications are accessible and up-to-date. User level and project specific support is provided on an ongoing basis.

  - **Base Map Data** – Maintains the infrastructure base map and databases to allow analysis of city data through visual representation. Ensures drainage, sanitary, and water network features are captured with all relevant data. Work with Engineering and Utilities to maintain the GIS data that reflects work done on the physical infrastructure. Acquires and makes available updated aerial imagery.

  - **Web Based GIS Applications** – Updates My Neighborhood, Economic Development GIS Application and Interactive Maps as new tools and data are available. Ensures that sites are accessible for internal City use and for the Public. Identifies changes to application code that are needed to ensure that the sites remain relevant with the constant changes to coding languages. Creates new web maps and applications as needed.

- **GIS Administration** – Perform system maintenance on GIS servers. Handle all aspects of GIS application management from design, installation, and maintenance. Configuration and maintenance of all Global Positioning System (GPS) hardware, large format printing, large format document management, and software licensing.

Service Level Expectations

Each measured objective is documented in existing processes and procedures.

Successful Changes – This measure is found in the Change Management System as it currently exists in the IT Department. The calculation is total changes made that do not require usage of the back out plan over total changes made. This demonstrates thorough attention to planning and testing.

Availability – This measure is found in the Help Desk system and is calculated as amount of time systems are available during scheduled hours over amount of total time. This demonstrates the amount of unscheduled time the systems are not available to the users.

Successful Project /Application Completions – This measure is currently found in the weekly reports from staff and is calculated as the number of projects requiring re-work after completion over total number of projects. This demonstrates the effectiveness and efficiency of projects being managed by IT staff.

Completion of Problems and Incidents within Time Frame – This measure is found in the existing Help Desk system and is calculated as number of problems that are resolved within the timeframe assigned based on severity and priority over the total number of problems reported. This demonstrates the timeliness in which problems or incidents are resolved after notification to the Help Desk.

Customer Satisfaction – This measure is found in the results of the RFS Survey sent to each person after they have had an assigned RFS closed. The successful and courteous completion, timeliness and handling of the issue by the appropriate personnel are measured in this survey. The calculation is the total number of responses that are at least satisfactory over the total number of surveys received.

Program: Information Technology	
Service (objective)	**Service Level Expectation**
Application Development (successful application completions)	Successful development and implementation of in-house applications
End User Support (customer satisfaction / completion of problems within timeframe)	Timely resolution of requests while providing superior customer service.
Geographical Information Services (availability / successful project completion)	Ensure spatial data is up-to-date and accessible by coordinating city wide activities and retaining responsibility for City of Sugar Land Geographic Information Systems.
Operations (availability / successful project completions)	Maintain the integrity of the City of Sugar Land's computer, network and communications infrastructure.
Project Management (successful project completions)	Successful initiation, implementation and closure of technology projects